

- a) blending said contaminated sediments or soils with a calcium oxide source, alumina, ferric oxides and fluxing agent to form a mixture;
- b) heating the mixture to produce a completely molten homogeneous reaction product;
- c) bubbling oxygen through the reaction product for destruction of said organic contaminants;
- d) quenching the reaction product in the presence of moist air, steam or water to form a reactive amorphous material having a silicate network, and thereby incorporating inorganic contaminants and heavy metals within the silicate network;
- e) pulverizing the reactive amorphous material to form a reactive cementitious powder;
- f) blending the cementitious powder with cement to yield a blended cement.

3. (once amended) A generally homogeneous reactive melt product which is amorphous and has the composition of: calcium oxide (CaO), about 20 to 40 wt%; silica (SiO₂), about 45 to 65 wt%; alumina (Al₂O₃), about 5 to 20 wt%; ferric oxide (Fe₂O₃), about 2 to 10 wt%; and fluxing agent, about 0 to 5 wt%.

4. (once amended) The reactive melt product of Claim 3, further including minor chemical components of magnesia (MgO), alkalis (Na₂O and K₂O), sulfur trioxide (SO₃) present

as gypsum, halogens present as halogenated inorganics, phosphorus oxide (P_2O_5), titanium oxide (TiO_2) and strontium oxide (SrO).

9. (once amended) A blended cement comprising a mixture of portland cement and a reactive melt product, said reactive melt product including a generally homogeneous mix of CaO , SiO_2 , Al_2O_3 , Fe_2O_3 and CaF_2 , the weight ratio of reactive melt product to portland cement being from about 10 parts of reactive melt product to about 90 parts of portland cement up to about 70 parts of reactive melt product to about 30 parts of portland cement.

REMARKS

In the above identified Office Action, the Examiner has rejected claims 1-11 under 35 U.S.C. §103(a) as being unpatentable over the references to Rostoker et al., Mason et al., Pichat, Meegoda et al., or Detering et al., in view of Lewis. The Examiner has noted that these references appear to differ from the presently claimed invention because they do not teach the specific glass composition of Applicant's claimed invention nor the fluxing agent. The Examiner has stated that Lewis teaches a glass composition that contains the same ingredients in overlapping amounts. Applicant notes that Lewis does not teach a fluxing agent and may be distinguished on these grounds alone. Further, Lewis teaches a glass having a relatively high alkaline content i.e., soda ash from 5 to about 22 wt%. The standard specification for the physical properties for blended hydraulic cements is the equivalent of Na_2O , calculated as $\% Na_2O + 0.658 \%K_2O$ and should be less than 1 wt%, preferably less than 0.6 wt%. (See ASTM standard C150-95, C1157M, and Kirk-Othmer, pg. 586). As a result of the high alkalinity of